

Title (en)

Method and system for performance testing of rotating machines

Title (de)

Verfahren und System zur Leistungsprüfung von rotierenden Maschinen

Title (fr)

Méthode et système d'essai de performance de machines tournantes

Publication

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Application

EP 01100141 A 19990601

Priority

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Abstract (en)

[origin: WO9966335A1] A method for measuring an angular rotation of a rotating shaft, comprising the steps of attaching to the shaft a digital rotary encoder which generates successive HIGH and LOW logic levels during respective successive time intervals. The shaft is rotated and the respective time periods of each successive logic level generated by the digital rotary encoder are accumulated so as to allow derivation of the angular rotation or a function thereof of the shaft. Such a method produces accurate results regardless of tolerance errors in the duty cycle of the encoder. This may be used for testing a performance of a rotating machine or of a component thereof in order to derive a speed-time characteristic of the rotating machine or a function thereof. Owing to the inherent high measurement resolution of the invention, dynamic performance may be determined accurately as well as steady-state performance without the need to slow down the machines speed of rotation by use of a flywheel.

IPC 1-7

G01P 3/489; **G01R 31/34**; **G01L 3/00**

IPC 8 full level

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Citation (search report)

- [X] DE 2623494 A1 19771215 - BOSCH GMBH ROBERT
- [X] DE 1232774 B 19670119 - BBC BROWN BOVERI & CIE
- [X] FR 2566132 A1 19851220 - AEROSPATIALE [FR]

Cited by

CN104280681A; CN105651324A; US7840372B2; WO2012041481A1; US9255950B2

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